



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/287,570	04/06/1999	AKIHISA USHIROKAWA	Q53866	6456

7590

10/10/2003

SUGHRUE MION ZINN
MACPEAK & SEAS
2100 PENNSYLVANIA AVENUE NW
WASHINGTON, DC 20037

EXAMINER

ABELSON, RONALD B

ART UNIT

PAPER NUMBER

2666

DATE MAILED: 10/10/2003

18

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/287,570

Applicant(s)

USHIROKAWA ET AL.

Examiner

Ronald Abelson

Art Unit

2666

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 7/13/2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) See Continuation Sheet is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17,77,79 and 162 is/are allowed.
- 6) ☒ Claim(s) See Continuation Sheet is/are rejected.
- 7) ☒ Claim(s) See Continuation Sheet is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 April 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Art Unit: 2666

RCE

1. This application is an RCE.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 16, 40, 41, 64, 65, 80-82, 157, 160 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The applicant claims a second and third control signal, but not a first.

Claim 75-79, 149-156, 158, 159, and 161 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The applicant claims a second control signal, but not a first.

Claims 6, 12, 30, 33, 36, 39, 54, 57, 100, 102, 104, and 163 are rejected under 35 U.S.C. 112, second paragraph, as being

Art Unit: 2666

indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claims 6, 30, 54, 100, and 163, the applicant claims a third control signal, but not a second.

Claim 166 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The applicant claims a third control signal, but not a first nor a second.

Claims 164, 165, and 167 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The applicant claims a second control signal, but not a first.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

Art Unit: 2666

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claim 1, 2, 25, 26, 49, 50, 72-73, 96, 97, 114, 115, 132, and 133, are rejected under 35 U.S.C. 102(e) as being anticipated by Hirohashi (US 5,600,471).

Regarding claim 1, 25, 49, 72, 73, 96, 114, and 132, Hirohashi teaches a method and apparatus for a mobile communication system (wireless, col. 2 lines 30-37).

The system comprises a transmission control means for providing a vacant period (idle intervals, fig. 5 (A), col. 10 11-13), in which no communication data is present, in one or more control frames, and inserting a first control signal which includes a pilot signal (fig. 5B signal 151) to be used for at least one of demodulation of the communication data and transmission power control for a forward link in the vacant period (sets the amplification factor, col. 10 lines 31-37).

Regarding claim 49, in addition to the limitations listed, a base station. The examiner equates the device that transmitted the information (fig. 5A,B) with the base station.

Art Unit: 2666

Regarding claim 72, in addition to the limitations previously mentioned, a quality measuring means (fig. 15 box 90, comparator, signal level is above a predetermined threshold, col. 16 line 63 - col. 17 line 1) and a transmitting means for generating and transmitting a transmission power control information for a forward link according to the reception quality (pilot signal is inhibited, col. 17 lines 2-7). The examiner equates the device that received the information (fig. 5A,B) with the mobile station.

Regarding claim 73, in addition to the limitations previously mentioned, a demodulation means (fig. 8 box 86). The examiner equates the device that received the information (fig. 5A,B) with the mobile station.

Regarding claims 96, 114, 132, in addition to the limitations previously listed, transmission power control for a reverse link (col. 8 lines 33-34),

Regarding claims 2, 26, 50, 97, 115, and 133, inserting a first control signal at a predetermined time interval (fig. 5B element 151, col. 10 lines 23-27).

Art Unit: 2666

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 18, 42, 66, 91, 107, 125, and 143 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirohashi as applied to claims 1, 25, 49 72 96 114 132 above, and further in view of Ueno (US 5,574,785).

Although Hirohashi teaches a vacant period, the reference is silent on how it was created.

Ueno teaches data compression in order to create a vacant period for inserting a control signal (fig. 12 box 520 col. 11 lines 28-32).

Therefore it would have been obvious to one of ordinary skill in the art, having both Hirohashi and Ueno before him/her and with the teachings [a] as shown by Hirohashi, a mobile communication system, and [b] as shown by Ueno, teaches data compression in order to create a vacant period for inserting a

Art Unit: 2666

control signal, to be motivated to modify the system of Hirohashi by using data compression in order to create a vacant period for inserting the pilot signal. This would improve the system by being able to transmit the data as well as a pilot signal in the same time period.

Allowable Subject Matter

8. Claims 17, 77, 79, and 162 are allowed.

Claim 3, 4, 8, 9, 11, 19-24, 27, 28, 32, 35, 43-48, 51, 52, 56, 59-60, 67-71, 74, 88, 92-95, 98, 99, 101, 103, 105, 108-113, 116-123, 126-131, 134-141, and 144-148, are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 3, 27, 51, 98, 116, 134, nothing in the prior art of the record teaches or fairly suggests the time interval of a first control signal inserted during the vacant period is set to be longer than a time interval of the first control signal in a communication mode where transmission data are present in the communication frame that does not include any vacant periods, in combination with all the other limitations listed in the claim.

Art Unit: 2666

Regarding claims 4, 8, 16, 32, 52, 99, 117, 135 , 136, nothing in the prior art of the record teaches or fairly suggests a vacant period from a timing immediately after a second control signal, in combination with all the other limitations listed in the claim.

Regarding claim 6, nothing in the prior art of the record teaches or fairly suggests a third control signal immediately after the end of a vacant period, in combination with all the other limitations listed in the claim.

Regarding claim 17, nothing in the prior art of the record teaches or fairly suggests the second control signal being a transmission power control for a reverse link and the third control signal being a pilot signal used for at least one of demodulation of the communication data and transmission power control for a forward link, in combination with all the other limitations listed in the claim.

Regarding claim 19-24, 43-48, 67-71, 92-95, 108-113, 126-131, 144-148, nothing in the prior art of the record teaches or

Art Unit: 2666

fairly suggests a communication mode is switched into a mode, in combination with all the other limitations listed in the claim.

Regarding claims 35, 58, 74, 88, 132, 162, although Hirohashi teaches, transmission power control for a reverse link (col. 8 lines 33-34), nothing in the prior art of the record teaches or fairly suggests control information for the reverse link being transmitted on the forward link.

Regarding claims 4, 8, 28, nothing in the prior art of the record teaches or fairly suggests a vacant period immediately after a second control signal, in combination with the other limitations listed in the claim.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronald Abelson whose telephone number is (703) 306-5622. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (703) 308-5463. The fax phone number for the

Art Unit: 2666

organization where this application or proceeding is assigned is
(703) 872-9306.

Any inquiry of a general nature or relating to the status
of this application or proceeding should be directed to the
receptionist whose telephone number is (703) 305-9600.

ra
Ronald Abelson
Examiner
Art Unit 2666

DMT

DANGTON
PRIMARY EXAMINER

Continuation of Disposition of Claims: Claims pending in the application are 1-4,6,8,9,11,12,16-28,30,32,33,35,36,39-52,54,56,57,59,60,64-82,88,91-105,107-123,125-141 and 143-167.

Continuation of Disposition of Claims: Claims rejected are 1,2,6,12,16,18,25,26,30,33,36,39-42,49,50,54,57,64-66,72,73,75-82,91,96,97,100,102,104,107,114,115,125,132,133,143,149-161 and 163-167.

Continuation of Disposition of Claims: Claims objected to are 3,4,8,9,11,19-24,27,28,32,35,43-48,51,52,56,59,60,67-71,88,92-95,98,99,101,103,105,108-113,116-123,126-131,134-141 and 144-148.